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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,910	12/24/2003	Sang-Jin Kim	1567.1063	9164
49455	7590	02/25/2008		
STEIN, MCEWEN & BUI, LLP 1400 EYE STREET, NW SUITE 300 WASHINGTON, DC 20005			EXAMINER MERCADO, JULIAN A	
			ART UNIT	PAPER NUMBER
			1795	
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			02/25/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/743,910	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> JULIAN MERCADO	<b>Art Unit</b> 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11-27-07.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 10-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 18-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Remarks***

Claims 1-29 are pending, of which claims 10-17 are withdrawn from consideration.

### ***Claim Objections***

The objection to claims 1 and 8 have been withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 18 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Sheem et al. (U.S. Pat. 6,355,377 B1).

The citation for clear anticipation is maintained as in the prior Office action. Applicants argument has been fully considered but is not found persuasive. Applicant submits that Sheem does not teach the shell to contain cyrstalline carbon micro-particles. This is not persuasive, as the cited portion of Sheem et al., *inter alia*, teaches that “[t]he negative active material includes... 0.1 to 50 wt % of the semi-*crystalline* carbon shell having turbostratic structure.” (emphasis

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added) With respect to present amendment to claim 18 now reciting the carbon shell consisting essentially of crystalline carbon micro-particles, the examiner asserts that the transitional phrase “consisting essentially of” limits the scope of a claim to the specified materials or steps “and those that do not materially affect the basic and novel characteristic(s)” of the claimed invention. *In re Herz*, 537 F.2d 549, 551-52, 190 USPQ 461, 463 (CCPA 1976) (emphasis in original) To this extent, other than the mere mention that the transitional phrase consisting essentially of is intended to exclude the catalyst materials contained in Sheem et al., the examiner notes that applicant has the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant’s invention. *In re De Lajarte*, 337 F.2d 870, 143 USPQ 256 (CCPA 1964). See also *Ex parte Hoffman*, 12 USPQ2d 1061, 1063-64 (Bd. Pat. App. & Inter. 1989) As applicant has not met this burden, and as the specification is absent a clear indication either in the specification or in the claims of what the basic and novel characteristics actually are, “consisting essentially of” has been interpreted as equivalent to “comprising.” See, e.g., *PPG*, 156 F.3d at 1355, 48 USPQ2d at 1355. See also *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1240-41, 68 USPQ2d 1280, 1283-84 (Fed. Cir. 2003)

Claim 18 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Miyabayashi et al. (U.S. Pat. 5,401,598).

The citation for clear anticipation is maintained as in the prior Office action, which is additionally supported by col. 4 line 8 et seq., which teaches a “peak of the diffraction line corresponding to the *crystalline* structure at the surface layer portion described above....” (emphasis added) Applicant’s argument that does not teach a surface layer which comprises

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crystalline carbon micro-particles has been fully considered but is not found persuasive, being counterfactual to what Miyabayashi et al. actually teaches as found in the instant citation. The present amendment to claim 18 now reciting the carbon shell as consisting essentially of crystalline carbon micro-particles is noted, but for the foregoing reasons discussed *supra*, “consisting essentially of” has been interpreted as equivalent to “comprising.”

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 19-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheem et al. (U.S. Pat. 6,355,377 B1) in view of Miyabayashi et al. (U.S. Pat. 5,401,598).

The rejection is maintained for the reasons of record. In addition to independent claim 18 (addressed under the 35 USC § 102 claim rejections section), the examiner notes that independent claim 1 is similarly amended to recite the shell as consisting essentially of crystalline carbon micro-particles. However, for the foregoing reasons discussed *supra*, “consisting essentially of” has been interpreted as equivalent to “comprising”, and absent of applicant meeting the burden of showing that the introduction of additional steps or components would materially change the characteristics of applicant’s invention, that the shell in Sheem includes catalyst elements as graphitization catalysts is not considered as being precluded by the scope of the claim. Notwithstanding, in response to the argument that the crystalline particles in

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Sheem relates to the structure of the core and not to the shell, this argument is not persuasive, as col. 7 lines 51-53 of Sheem et al. actually recites that “[t]he negative active material includes... 0.1 to 50 wt % of the semi-*crystalline* carbon shell having turbostratic structure.”

As to Miyabayashi et al. allegedly providing no information regarding the Raman spectra data of the shell, this argument is not persuasive, as Miyabashi et al. actually teaches that the ratio of peak intensities R is based on “the ratio of the non-crystalline structure portion at a *surface layer* of the carbonaceous material...” (emphasis added) Furthermore, the argument that Sheem et al. and Miyabayashi et al. do not teach the same negative active material is not persuasive, given that both patentees clearly teach carbonaceous materials, and to the extent that the assertion made in the prior Office action that the prior art teaches or at least suggest the same negative active material is to say that Sheem et al., modified for the reasons set forth on page 5 of the Office action, is the same material, inherently, as that presently claimed. Stated differently, the basis for inherency is not premised on Sheem et al. and Miyabayashi et al. being the same active material, but more so based on the active material in Sheem et al. (as a primary reference teaching) being modified by the teachings of Miyabayashi et al. (as a secondary reference teaching), with the resultant negative active material being the same, inherently, as applicant's claimed active material. Notwithstanding, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (571) 272-1289. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

/J. M./

Examiner, Art Unit 1795

/PATRICK RYAN/

Supervisory Patent Examiner, Art Unit 1795